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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,795	02/12/2001	Malcolm F. Ruppert	60,130-1004	6956

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EXAMINER
VANAMAN, FRANK BENNETT

ART UNIT	PAPER NUMBER
3618	

DATE MAILED: 07/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/781,795	Applicant(s) RUPPERT ET AL.	
	Examiner Frank Vanaman	Art Unit 3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 May 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-41,43-46,48-55,57 and 58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *41 and 43-46* is/are allowed.

6)☒ Claim(s) *23-28,32,36-40 and 48* is/are rejected.

7)☒ Claim(s) *29-31,33-35,49-55,57 and 58* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *19* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Status of Application

Applicant's amendment, filed May 6, 2003, has been entered in the application. Claims 23-41, 43-46, 48-55, 57 and 58 are pending.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 23-28, 38 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Dest et al. (FR 2,507,550, cited by Applicant). Van Dest et al. teach a driving unit assembly including first and second wheels (1) mounted on hubs (2), which rotate about a lateral axis of rotation (axles 22, co-linear with the connection between 19 and 8), first and second upwardly extending electric motors (11) mounted on a common axle housing (23), driving first and second gear sets (13, 14, 15, 18, etc.) including a pinion and ring gear pair (13, 14) both of which are mounted so as to rotate with the sun gear (8) when the wheel hub rotates (through the remaining gear elements 18, 19), a longitudinal motor axis (along motor output shaft 12) being transverse to the lateral rotation axis, each motor longitudinal axis being spaced from the other, and first and second planetary gear sets (ring gear 6, planet gears 7, sun gear 8; collectively referred to by numeral 5) incorporated into the wheel hubs (e.g., 2, note, for example in figure 1) and driven by the respective first and second gear sets, further including plural gear boxes (3, 10) for housing the first and second gear sets, the motors being mounted to the gear boxes (figure 2), the planetary gears being incorporated into the gear boxes (at 3).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 23, 26, 32, 36, 37, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roe (US 3,161,083, cited by Applicant). Roe teaches a vehicle drive system including a pair of co-linear driving shafts (48) for driving wheels (22RL, 22RR) about a lateral rotation axis, first and second gear sets (30R, 30L), each wheel being drivable by a pair of electric motors (figure 3), mounted on a common longitudinal axis

transverse and perpendicular to the driving rotation axis, each gear set including a pinion (64) and ring (66) set, as well as a planetary gear set (42, 46, 58), at least one of the motors of each motor pair (the rearward '#1' motors) being mounted to extend rearwardly from the lateral axis of rotation. The reference of Roe fails to specifically teach the use of wheel hubs to support the wheels. The provision of a wheel hub for the purpose of allowing a wheel to be rotatably supported on a vehicle is very old and well known, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the vehicle wheels of Roe with hubs (driven by the output shafts 48, for example) for the purpose of allowing the vehicle to easily move from one location to another.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roe (US 3,161,083, cited by Applicant) in view of Kawamoto et al. (US 5,419,406, cited previously). The reference of Roe is discussed above and fails to explicitly teach the provisions of the gear sets as being mounted in gear boxes mounted to the motors. Kawamoto et al. teach a motor drive scheme wherein drive motors (e.g., 1) mounted in a housing (3a) are connected to a gear set (e.g., 2, 13) mounted in a gear box (3b) which is mounted to the motor housing (e.g., figure 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to mount the gear sets of Roe in housings mounted to the motors as suggested by the incorporated motor and gear set housings of Kawamoto et al. for the purpose of containing the gears in an enclosed space, preventing foreign objects from interfering with the gear operation.

Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Austin in view of Quartullo and Van Dest et al. Austin teaches a passenger vehicle having a plurality of seats located on higher floor portions and a centrally located aisle located on a lower floor portion, wherein an engine, for driving the vehicle wheels is located higher than the aisle floor. The reference of Austin fails to teach the wheels as being driven by electric motors mounted at a right angle to the wheel rotational axes and driving the wheels through a gearing system.

Quartullo teaches a vehicle having a body and a pair of wheels, each wheel driven by a motor through a 90 degree angle, the driving force being transmitted through a worm-drive gear set, and wheel axle to wheel hubs, wherein a floor of a vehicle has a lower extent in a central location, and an upper extent, wherein the motors are mounted vertically higher than the central floor portion. It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the wheel driving engine of the vehicle of Austin with the individual electric drives taught by Quartullo for the purpose of allowing the driven wheels to be independently suspended, as suggested by Quartullo. The reference of Austin as modified by Quartullo fails to teach the gearing system as driving a planetary gear set.

Van Dest et al. teach a wheel (1) having an electric motor (11) drive, wherein a gear set (e.g., 13, 14, 18, 19) drives a planetary gear set (6, 7, 8) located in the wheel hub. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a planetary gear set, as taught by Van Dest et al., driven by the gear set of Austin as modified by Quartullo, for the purpose of reducing the wheel running speed, and allowing higher speed motors to be employed.

Allowable Subject Matter

Claims 41 and 43-46 are allowed.

Claims 29-31, 33-35, 49-55, 57 and 58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

At page 12 of the response applicant has argued that the drive turret of Van Dest is not a ground engaging vehicle portion, but rather a device for driving a load up a mast. Applicant is explicitly invited to point out the portions of Van Dest which describe this feature. A perusal of the drawings shows no mechanism for allowing the drive turret to be connected to such a mast, nor does any portion of the specification, or the translation provided by applicant describe any such feature. A review of the translation of Van Dest at page 4, lines 5-12 describing the various driving modes of the turret element (and in addition, the reference to the mounting of the turret as set forth in the reference) similarly fails to provide support for the allegation that this drive turret is for driving a load up a mast. Applicant is most welcome to clarify this interpretation of Van Dest, preferably by pointing out specific passages in the reference which support this argument.

Further, applicant has not seasonably presented any evidence to support these arguments. Note that the arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

As regards the automotive characteristics of the device taught by Van Dest, Van Dest's drive mechanism meets the limitations of the commonly held definition of automotive, to the breadth it has been claimed, and applicant has not set forth any further particular definition differing from that which is commonly held.

As regards applicant's comments that no element in Van Dest is a tire, applicant may desire to note the element indicated by numeral 1 in figure 1, 2, and 3. Further, note that wheel hub (2) in Van Dest does rotate, as can be determined from a viewing of figure 1, and as clearly set forth in the translation at page 3, lines 1-2 ("...two coaxial wheels 1, each having hub 2 mounted so as to rotate on stub axle 3..."). Van Dest calls element 2 a hub, in the translation, and the examiner does not disagree with Van Dest's characterization. If applicant is aware of information which specifically contradicts Van Dest's characterizations, applicant is invited to provide such evidence.

It is not clear why applicant continues to rely upon Ex Parte Gavin, in that Gavin is directed to a condition which is not analogous to the instant prosecution. Should the instant application be under appeal and be forwarded to the Board, a translation would be provided, as would be appropriate.

Applicant has additionally argued that "[a]pplicant does not have a duty to provide the examiner with translations of non-English references that are *cited* against Applicant's claims by the examiner" (emphasis added). The examiner agrees, however it was applicant who has cited the reference, the examiner has merely applied it against the claims in response to applicant's citation.

As regards the reference to Roe, applicant appears to suggest, in the arguments, limitations which are not claimed. The claim refers to electric motors which drive a gear set and planetary gear sets which are driven by the gear sets. Motor 28L (for example) drives the gear set 64-66 through the planetary gear set when outputting torque, and the planetary set (42, 46, 58) is driven by the gear set 64-66 when the vehicle coasts. The breadth of the claim recitation does not preclude such an interpretation. There is no limitation in the claims referring to a direct drive of the motor, nor that both conditions occur simultaneously. As regards applicant's assertion concerning figure 3 of Roe, applicant is reminded that Roe's disclosure is not limited to figure 3 and there is no portion of Roe which disclaims the subject matter of figure 1, which shows the limitation as claimed.

As regards the rejections based on combinations of references, in response to applicant's argument that the references must explicitly provide a suggestion for combining, a conclusion of obviousness may be made from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference (see In re Bozek, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969)), with skill being presumed on the part of the artisan, rather than the lack thereof (see In re Sovish 769 F.2d 738, 742, 226 USPQ 771, 774 (Fed. Cir. 1985)); further, references may be combined although none of them explicitly suggests combining one with the other (see In re Nilssen 7 USPQ2d 1500 (Fed. Cir. 1989)).

Please further note the following from Section 2144 of the MPEP: "The rationale to modify or combine the prior art does not have to be expressly stated in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent...The reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem...It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by Applicant." Also Chief Judge Nies writes in a concurring opinion, "While there must be some teaching, reason, suggestion, or motivation to combine existing elements to produce the claimed device, it is not necessary that the cited references or the prior art specifically suggest making the combination...In sum, it is off the mark for litigants to argue, as many do, that an invention cannot be held to have been obvious unless a suggestion to combine prior art teachings is found in a specific reference". See In re Oetiker 977 F.2d 1443, 24 USPQ.2d 1443 (Fed.Cir.1992).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 703-308-0424. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is 703-308-1113.

As of May 1, 2003, any response to this action should be mailed to:

Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:

703-305-3597 or 305-7687 (for formal communications intended for entry; informal or draft communications may be faxed to the same number but should be clearly labeled 'UNOFFICIAL" or "DRAFT").

The Office has also established electronic fax servers for T.C. 3600:

703-872-9326 (Official communications)
703-872 9327 (Official After-Final communications)
703-872-9325 (Customer Service)

F. VANAMAN
Primary Examiner
Art Unit 3618

7/23/03